REMARKS

Claims 19-32, 37-45, 64, and 66-70 are pending. Claims 46-63 and 65 are canceled herein.

Amendments to the Claims

Claims 19, 20, 24, 30, 32, 42, 68, and 69 have been amended.

Claims 19 and 69 are amended to recite that when the gel particles coalesce from the gelling agent solution in the hydrophobic liquid stream, the gel particles have the active and the restraining polymer entrapped therein. Support is found in at least paragraph [0096].

Claims 20 and 30 have been amended to remove an extra "the" or to add "the."

Claim 24 has been amended to remove the optional language therein.

Claim 32 has been amended to remove the word "optionally" and the phrases "synthetic polymers" and "natural polymers."

Claim 42 has been amended to provide antecedent basis for the inner diameter of the discharge orifice and for the velocity of the moving stream of hydrophobic liquid.

Claims 68 and 69 have been amended to change "below about 30°C" to "about 30°C or below." Applicants submit that these phrases are equivalent and only make this amendment because it was suggested by the Examiner and will move prosecution forward.

Applicants submit that no new matter was added by these amendments.

Claim Rejections – 35 U.S.C. § 112

§ 112, first paragraph

Claims 32-35 are rejected under 25 U.S.C. § 112, first paragraph as failing to comply with the written description. Claims 33-35 are canceled.

The Office contends that the recitation of "synthetically modified polysaccharides," "synthetically modified proteins," "synthetic polymers," "natural polymers" and "botanically derived gels" do not meet the written description. Applicants have canceled "synthetic polymers" and "natural polymers" from claim 32. Applicants, however, contend that "synthetically modified polysaccharides," "synthetically modified proteins," and "botanically derived gels" do meet the written description. Claim 32 recites that the gelling agent is a "pH stable water-soluble polymer," accordingly one of skill in the art would know what chemical

structures of a synthetically modified polysaccharide and proteins and what botanically derived gels would meet this requirement.

§ 112, second paragraph

Claims 24, 32, 42, 68 and 69 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 24 has been amended to remove the "optional" language that the Office believed rendered the claim indefinite. Accordingly, the rejection should be withdrawn.

Claim 32 has been amended to remove the word "optionally," which the Office believed rendered the claim indefinite.

Claims 32 has also been rejected because of the phrase "botanically derived gel." The Office contends that Applicant has provided no definition of botanically derived gels nor given any examples as to what constitutes a botanically derived gel. However, gels and gelling agents are well know in the art. Likewise, the manufacture of gelling agents (and thus whether such agents are botanically or otherwise derived) has also been well known in the chemical arts for many years. It is thus believed the objection is properly withdrawn information which is well known in the art need not be described in detail in the specification. MPEP 2163(II)(A)(2) (citing Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1379-80, 231 USPQ 81, 90 (Fed. Cir. 1986)).

Claim 42 has been amended to remove the phrase "the discharge size," which the Office believed rendered the claim indefinite.

Accordingly, the rejection should be withdrawn.

Claims 68 and 69 have been amended as suggested by the Office and now recite "about 30°C or below. Accordingly, the rejection should be withdrawn.

Claim Rejections – 35 U.S.C. § 103

Claims 19-32, 37-45, 64, and 66-70 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Bretz et al., Brandau et al., Grulke, and Hsiu. Applicants disagree.

Claims 19 and 69, as amended, recite a method that includes the step of forming an aqueous solution of a polymeric gelling agent that includes an active and a restraining polymer.

The active and restraining polymer are entrapped within a gel particle as it coalesces from the gelling agent solution.

The combined references do not teach an aqueous solution containing a polymeric gelling agent, an active, and a restraining polymer

The Office admits that the Bretz reference does not teach water as the solvent for the polymer gelling agent. OA, pg. 9. Rather than water, Bretz teaches the use of solvents having nonpolar chemical structural moieties, for example, dichlorobenzene, anisole (aka methoxy benzene) and amyl acetate to dissolve the nonpolar polypropylene, polyethylene, and polyvinyl chloride polymer. It is a fundamental principle of chemistry that "like dissolve like," i.e., nonpolar dissolves nonpolar. On the contrary, polar does not dissolve nonpolar. Water does not dissolve nonpolar polypropylene, polyethylene, and polyvinyl chloride polymers. Accordingly, one of skill in the art would not substitute water into the method disclosed in Bretz as a solvent to attempt to make an aqueous solution of the nonpolar polypropylene, polyethylene, and polyvinyl chloride polymers.

Furthermore, one of skill in the art would not substitute water into the method disclosed in Bretz because the reference teaches away from such a solvent. Bretz teaches that "[t]he solvent used to wash the polymer beads, should not form an azeotropic mixture with the solvents used to dissolve the polymers." The solvent disclosed for washing the polymer beads is an alcohol such as isopropanol. It is well known that water and isopropanol form anazeotropic mixture, which Bretz expressly states is undesirable. Accordingly, one of skill in the art would not change the method of Bretz to an aqueous solution based method.

The combined references do not teach the active and restraining polymer entrapped in a gel particle during its formation

The references as cited do not teach an aqueous solution comprising a polymeric gelling agent, an active, and a restraining polymer where the active and restraining polymer are entrapped in the gel particle when the gel particle coalesces from the solution. Bretz only teaches impregnating or stepping the porous polymer beads produced by the disclosed method with a catalytic compound after the porous beads are already formed. Col. 4, ll. 25-28; Example 7 (prepared porous polypropylene beads were transferred to an autoclave, diisoamyl ether was added, titanium tetrachloride was added, and then an aluminum compound was added and three hours later after several temperature changes a solid catalyst is removed). It appears that the

Office is arguing that the catalytic compound is the claimed "restraining polymer." However, Bretz, as just explained, does not teach that the catalytic compound is present in a solution containing the polymeric gelling agent before the gel particles are formed, as claimed.

The Office cites to Hsiu et al. as teaching alpha amylases as calcium metallo enzymes (as having catalytic properties) and that the structure of the calcium and amylase form a tight metal chelate structure. Hsui is cited to because the Office Action states that Bretz does "not teach that the catalyst is a polymer with active agent bonded to the polymer." However, Bretz also contains the defect pointed out above regarding the catalytic compound not being present in the solution containing the polymeric gelling agent and being entrapped in the gel particle during its formation. Hsui is not cited to remedy this basic defect, nor are any of the other cited references. All the limitations of the claims must be met to establish a *prima facie* case of obviousness. Accordingly, Applicants submit that the present rejections do not have a combination of references that teach all the limitations of the claims.

For at least these reasons, Applicants respectfully submit that the claims are non-obvious and request that the § 103(a) rejections be withdrawn.

Respectfully submitted,

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